

## NEW EOCENE FOSSILS FROM ALABAMA AND MISSISSIPPI.

BY T. H. ALDRICH.

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**KELLIA INTERSTRIATA** n. sp. Pl. v, figs. 1, 2.

Shell orbicular, slightly inequilateral, very much the shape of a tumid *Diplodonta*, surface smooth except in the medial part where it is distinctly striated. These striae are rather coarse, extending to the basal margin, but they stop at the umbo. Beaks rounded, fairly prominent, pointing inward, and terminate directly above one of the semi-laterals; no lunule. Dentition normal. Length, breadth and thickness about 5 mm.

LOCALITY. Enterprise, Miss. Top of Burrstone.

REMARKS: This shell has the general shape and outline of *K. suborbicularis*, Mont., also a similar dentition. It is peculiar in carrying the medial striations.

*Kellia prima* Aldr. is a *Bornia* according to Prof. W. H. Dall.

**CANCELLARIA? SOTOENSIS** n. sp. Pl. v. fig. 3.

Shell small, whorls about seven, the first two and a half embryonic and smooth, the cancellation beginning on the second half of the third whorl: the remaining whorls strongly cancellated, the body whorl contains 12 spiral lines, while the longitudinals are nearly three times as many; slightly nodular at the intersection points, suture very deep. Whorls strongly rounded. Base somewhat rounded. Aperture oblong, outer lip denticulated within, inner lip rather twisted, and carrying a small fold near the base. Umbilicus not entirely closed.

Length 8 mm.; width body whorl 3 mm.

LOCALITY. De Soto, Miss. Claibornian.

REMARKS: This little shell is more slender in shape than the drawing shows, and the suture is much more deeply impressed. It has somewhat the aspect of a *Scala*.

**CORBULA CLARKEANA** n. sp. Pl. v, figs. 4, 5.

Shell small, medium thickness, valves moderately inflated. Beaks not very prominent, polished, a groove running from beaks to base in the largest specimens, nearly in the middle of the shell. Valves marked with a few impressed lines of growth wide apart; the outer

surface having a polished look; smooth internally, cardinal tooth large, projecting.

Lon.  $3\frac{1}{2}$  mm.; alt. 3 mm.

LOCALITY. Wood's Bluff, Ala.

REMARKS: This little shell differs from any *Corbula* known to the writer by its polished appearance, and its few impressed lines, rare. One small valve does not have any depression running from beak to base, but is quite regularly rounded.

ARCA (BARBATIA) LIGNITIFERA n. sp. Pl. v, figs. 6, 7.

Shell small, thin, extremities rounded, moderately convex, beaks small and flattened; surface marked by many radial riblets crossed by irregularly spaced lines of growth; a depressed area running from beaks to base nearly central; valves smooth internally, but showing faint lines corresponding to some of the riblets. Hinge line long, slightly curved; the hinge carries four close-set teeth anteriorly, next a short vacant space, and then ten to thirteen small teeth, larger and more nearly parallel to the hinge line as they approach the posterior.

Lon. 5 mm.; alt. 3 mm.

LOCALITY. Six miles east of Thomasville, Ala., Wood's Bluff horizon.

SIGARETUS (EUNATICINA) ERECTOIDES n. sp. Pl. v, figs. 8, 9.

Shell small, thin, whorls five rapidly enlarging, apex somewhat twisted; the first two whorls smooth, the others covered with very numerous fine raised lines which become coarser on the body whorl. Aperture oblong, nearly twice as long as broad; outer lip slightly thickened; umbilicus channeled, and slightly open.

Lon.  $6\frac{1}{2}$  mm.; diam. 4 mm.

LOCALITY. De Soto, Miss., Claibornian.

REMARKS: This little shell has very much the form of a small *Succinea*, and resembles in miniature the living forms of the subgenus.

VERTICORDIA (HALIRIS) GRANULOIDES n. sp. Pl. v, fig. 10.

Shell small, rather rotund, surface with numerous rounded ribs, about nineteen in the type; they are granulated under a glass, and rather scabrous between the ribs, especially on the anterior. Posterior slope slightly angulated; basal margin crenulated. The ribs

also show through the body of the shell. Beak small and smooth, the cardinal tooth strongly projecting.

Lon.  $2\frac{1}{2}$  mm.; alt.  $2\frac{1}{2}$  mm.

LOCALITY. Wood's Bluff, Ala.

REMARKS: This species is mentioned by Prof. Dall as *Verticordia* sp. indet. The description is made from a good specimen found by the writer. The shell is rather small for even this genus.

ACTEON POMILIUS *Con.*, var. MULTANNULATUS. n. var. Pl. v. fig. 11.

The specimen here figured differs from the typical form by having much more numerous raised lines with shallower interspaces. The spire is higher and the shell more slender. The *Acteon* found by me at Wood's Bluff is different from the form figured by Prof. G. D. Harris, not having any smooth space on the body-whorl. These so-called species appear to belong in one basket.

Height 9 mm.; diam. 6 mm.

LOCALITY. Six miles east of Thomasville, Ala., Wood's Bluff beds.

LEPTON VAUGHANI n. sp. Pl. V, fig. 12.

Shell small, surface smooth and shining; lines of growth very fine, shell rather triangular in shape, longer than high; slightly inequilateral. Muscular scars showing, the posterior one rather long and narrow.

Long. 3 mm.; alt. 2 mm.

LOCALITY. Wood's Bluff, Ala.

REMARKS: This species seems to be an undoubted member of this genus, as it has the proper dentition; some specimens are equilateral. Named in honor of T. Wayland Vaughn of the U. S. Geological Survey. This seems to be the first *Lepton* found in the Eocene.

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#### NEW LAND SHELLS FROM ARIZONA AND NEW MEXICO.

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BY GEO. H. CLAPP.

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*Bifidaria (Chænaxis) tuba subsp. intuscostata.*

Differs from the type, externally, by its larger size, length 4, diam. 2 mm. and the greater number of whorls,  $6\frac{1}{2}$ . The smallest normal